

Customer No.: 31561
Application No.: 10/711,512
Docket No.: 13622-US-PA

AMENDMENT

To the Claims:

1. (original) A high density plasma chemical vapor deposition (HDPCVD) process, comprising:

performing a first deposition step on a wafer;

rotating the wafer with an angle; and

performing a second deposition step for completing a thin film deposition, the thin film having a uniform thickness, wherein a deposition system is adapted to deposit the thin film comprises n gas output holes, wherein the first and the second deposition steps require a time interval, and at one half of the time interval, the wafer is rotated at the angle of $360/2n$ degrees, and n is an integer.

2. (original) The HDPCVD process of claim 1, wherein the deposition system comprises eight output holes and the angle is 22.5 degrees.

3. (original) The HDPCVD process of claim 1, wherein the first and the second deposition steps constitute a deposition cycle, the process further comprising: repeating the deposition cycle at least once.

4. (original) The HDPCVD process of claim 3, wherein the deposition system comprises eight output holes and the angle is 22.5 degrees.

5. (original) A high density plasma chemical vapor deposition (HDPCVD) process, comprising:

performing a first deposition step on a wafer;

rotating the wafer with an angle; and

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performing a second deposition step for completing a thin film deposition, the thin film having a uniform thickness, wherein a deposition system is adapted to deposit the thin film comprises n gas output holes, and performing the first and the second deposition steps require a time interval, wherein at $1/m$ of the time interval, the wafer is rotated at the angle of $360/(m \cdot n)$ degrees, and m and n are integers.

6. (original) The HDPCVD process of claim 5, wherein the wafer is rotated with the angle at one half of the time.

7. (original) The HDPCVD process of claim 6, wherein the deposition system comprises eight output holes and the angle is 22.5 degrees.

8. (original) The HDPCVD process of claim 5, wherein the first and the second deposition steps constitute a deposition cycle, the process further comprising: repeating the deposition cycle at least once.

9. (original) The HDPCVD process of claim 8, wherein the wafer is rotated with the angle at one half of the time.

10. (original) The HDPCVD process of claim 9, wherein the deposition system comprises eight output holes and the angle is 22.5 degrees.

Claims 11-15. (cancelled)

16. (new) A method for improving uniformity of thickness of a thin film, adapted for a high density plasma chemical vapor deposition process, comprising:

forming the thin film with uniform thickness by rotating a wafer with an angle while depositing the thin film on the wafer, wherein a deposition system adapted to deposit the thin film comprises n gas output holes and depositing the thin film on the

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wafer requires a time, the wafer being rotated an angle with $360/(m*n)$ at $1/m$ of the time, m and n being integers.

17. (new) The method for improving uniformity of thickness of a thin film of claim 16, wherein at $1/2$ of the time, the wafer is rotated with the angle.

18. (new) The method for improving uniformity of thickness of a thin film of claim 17, wherein the deposition system comprises eight output holes and the angle is 22.5 degrees.

19. (new) The method for improving uniformity of thickness of a thin film of claim 16, wherein the chemical vapor deposition process comprises a high density plasma chemical vapor deposition (HDPCVD) process.